



US006320214B1

(12) **United States Patent**
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(10) **Patent No.:** US 6,320,214 B1
(45) **Date of Patent:** Nov. 20, 2001

(54) **SEMICONDUCTOR DEVICE HAVING A FERROELECTRIC TFT AND A DUMMY ELEMENT**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

ABSTRACT

The present invention provides a semiconductor device including a semiconductor element and a dummy semiconductor element adjacent to the semiconductor element. When the semiconductor element is a capacitor element including a bottom electrode, a top electrode and a dielectric layer between the electrodes, a dummy capacitor element also has dummy electrodes and a dummy dielectric layer between the dummy electrodes. The dummy electrode is located so that a space between the top electrode of the capacitor element and the dummy top electrode is in a predetermined range (e.g. 0.3 μ m to 14 μ m). The dummy capacitor element prevents the capacitor dielectric layer from degrading since the collision of the etching ions with the capacitor dielectric layer in a dry etching process is suppressed.

(21) Appl. No.: 09/209,214

(22) Filed: Dec. 11, 1998

(30) Foreign Application Priority Data

Dec. 24, 1997 (JP) 9-354430

(51) Int. Cl.⁷ H01L 29/76

(52) U.S. Cl. 257/295; 257/213; 257/296

(58) Field of Search 257/296-310,

257/532, 213, 295

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5 Claims, 21 Drawing Sheets

